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REMARKS

Minor changes are made to this specification. Claims 4, 5, 8, 11, 12, and 15-20 are canceled. Claims 1 and 21 are the independent claims. Claims 1-3, 6, 7, 9, 10, 13, 14, and 21 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

ALLOWABLE CLAIM

On page 3 of the Office Action, claim 21 was allowed.

Applicant thanks the Examiner and formally recognizes the allowable claim 21.

CLAIM REJECTION UNDER 35 U.S.C. § 103(a)

Claims 1-3, 6, 7, 9, 10, 13 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Uchimura (U.S. Patent No. 5,982,256) in view of Koriyama (U.S. Patent No. 6,239,669). Applicant respectfully traverse the rejection herein.

The present invention is directed to a high frequency line-to-waveguide converter in which a high frequency line is converted into a waveguide. The connection between the high frequency circuit and an antenna or between high frequency circuits is performed through the waveguide, such that mounting of a system can be easily performed. The independent claim 1 of present invention, as previously presented, is recited below:

> 1. A high frequency line-to-waveguide converter comprising:

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> a high frequency line including a dielectric layer, a line conductor disposed on one surface of the dielectric layer, and a ground conductor layer disposed on the same surface so as to surround one end of the line conductor,
>
> wherein the one end of the line conductor is short-circuited to the ground conductor layer;
>
> a slot formed in the ground conductor layer so as to be substantially orthogonal to the one end of the line conductor and coupled to the high frequency line;
>
> a shield conductor part disposed on a side of or in an inside of the dielectric layer so as to surround the one end of the line conductor and the slot; and
>
> a waveguide disposed on a side of the other surface of the dielectric layer so that an opening is opposite to the one end of the line conductor and the slot, the waveguide extending in a direction from the one surface of the dielectric layer toward the other surface thereof, and being electrically connected to the shield conductor part.

The applied references do not disclose or suggest the above features of one aspect of the present invention as defined by independent claim 1. In particular, Uchimura and Koriyama not disclose or suggest, "wherein the one end of the line conductor is short-circuited to the ground conductor layer," as required by that claim.

The Office Action states that transmission line 60 of Uchimura is connected to ground layer 3. Applicant respectfully disagrees with that assertion. The relevant disclosure of Uchimura is recited below for Examiner's convenience:

> On the other hand, a hole 61 is formed in the main conductive layer 2, and a connecting via-hole 62 extends through this hole 61 from the tip of the conductor passage 60 into the transmission line 5. Accordingly, the

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> microstrip line is combined with the transmission line 5 by the laminated waveguide. In the case of this combining method, in the same way as in FIG. 5, the connecting via-hole 62 is provided not to connect electrically to the lower main conductive layer 3. Furthermore, by the hole 61, the connecting via-hole 62 is provided not to connect electrically to the upper main conductive layer 2. (*Uchimura, col. 9, lines 34-44. Emphasis added by Applicant*).

Accordingly, Uchimura teaches that the transmission line 60 is not connected to ground layers 2 and 3. Uchimura thus fails to disclose or suggest that the one end of the line conductor is short-circuited to the ground conductor layer, as recited in independent claim 1.

Office Action agrees that Koriyama does not remedy the above deficiencies of Uchimura. (*Office Action; p. 4, first paragraph*). Accordingly, Applicant respectfully submits that independent claim 1 is allowable over the applied references, and such allowance is respectfully requested.

Dependent claims 2, 3, 6, 7, 9, 10, and 13-14 depend directly or indirectly from amended independent claim 1, and are allowable for at least the same reasons as amended independent claim 1.

Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los

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Angeles, California telephone number (213) 337-6809 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

Date: October 17, 2006

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